Fig.1

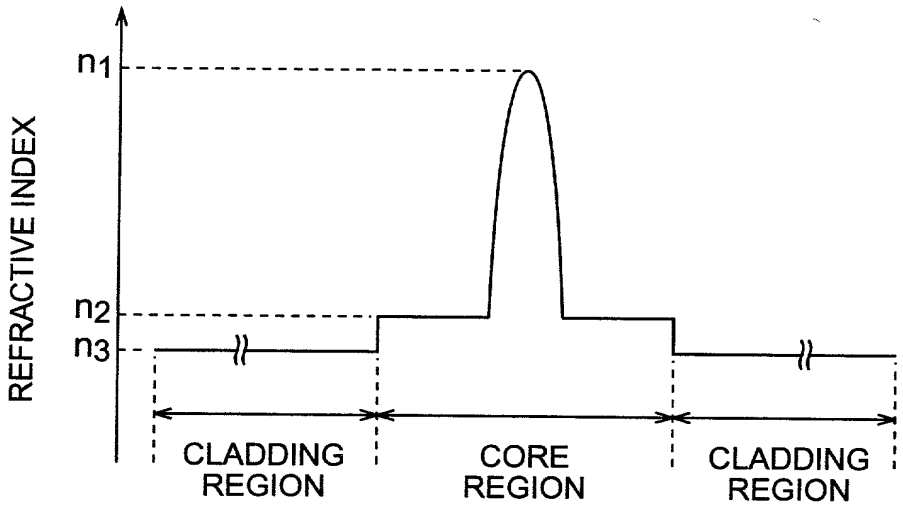

Fig.2

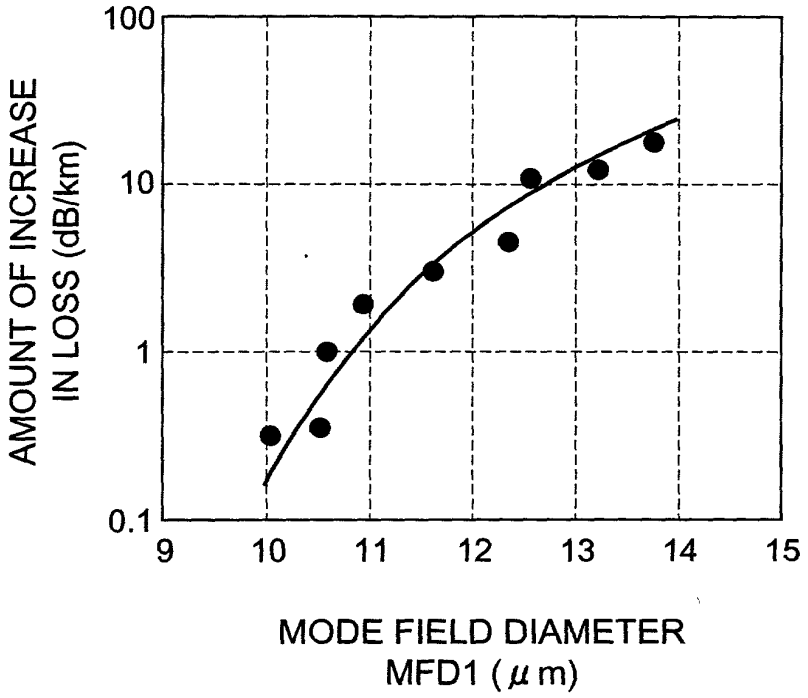

Fig.3A

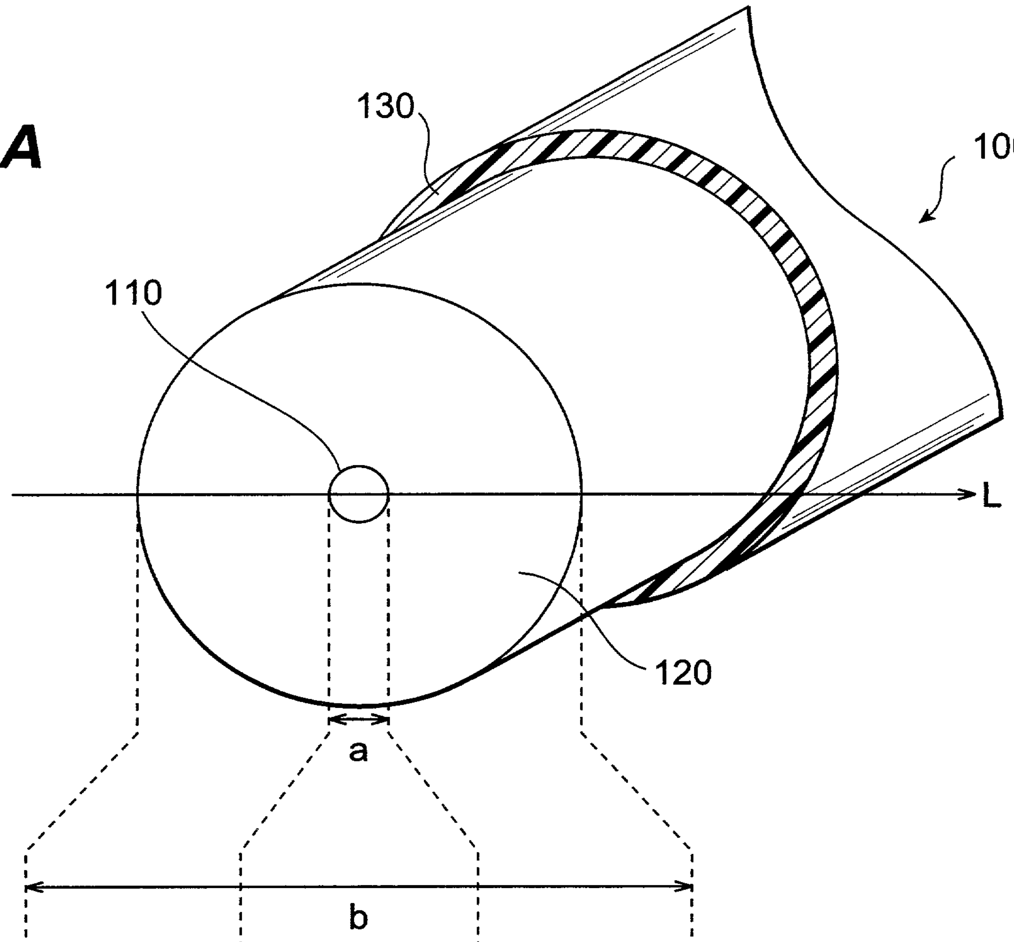
130
100
110
L
120
a
b

Fig.3B

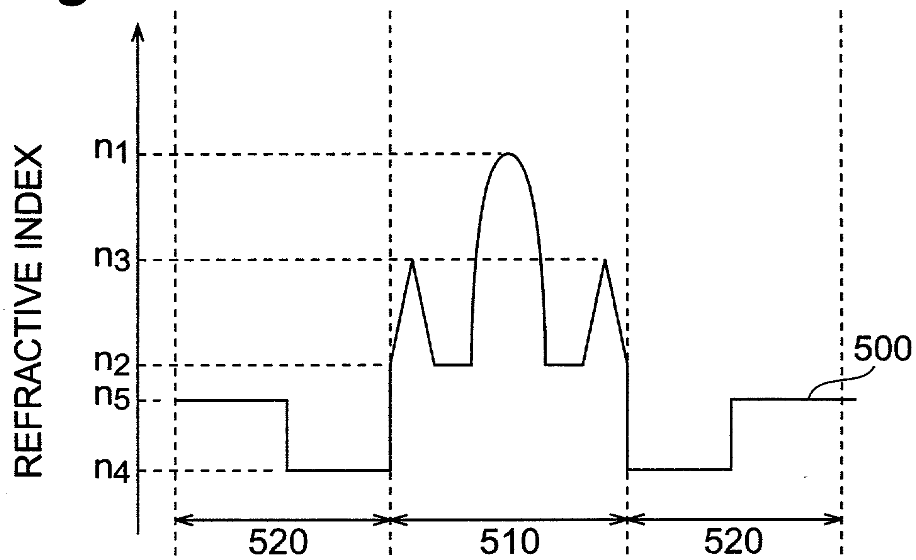
REFRACTIVE INDEX
n1
n3
n2
n5
n4
500
520
510
520

Fig.4A

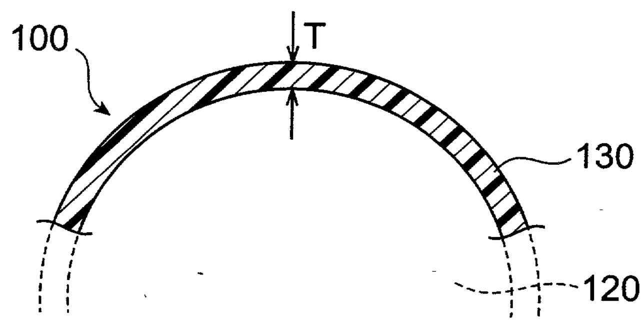

Fig.4B

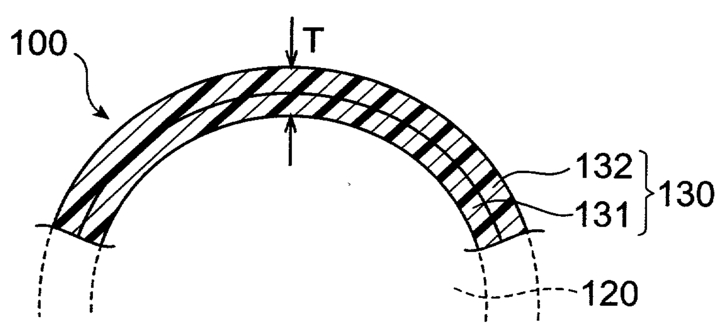

Fig.5

	SAMPLE 1 a	SAMPLE 1 b	SAMPLE 1 c	SAMPLE 1 d
FIBER DIAMETER (μm)	125.1	139.8	150.4	160.2
MFD (μm)	11.73	11.84	11.87	11.88
EFFECTIVE AREA(μm^2)	69.7	71.4	72.1	72.1
CHROMATIC DISPERSION (ps/nm/km)	-2.1	-2.2	-2.0	-1.9
CUTOFF WAVELENGTH(μm)	1.53	1.51	1.50	1.52

Fig.6

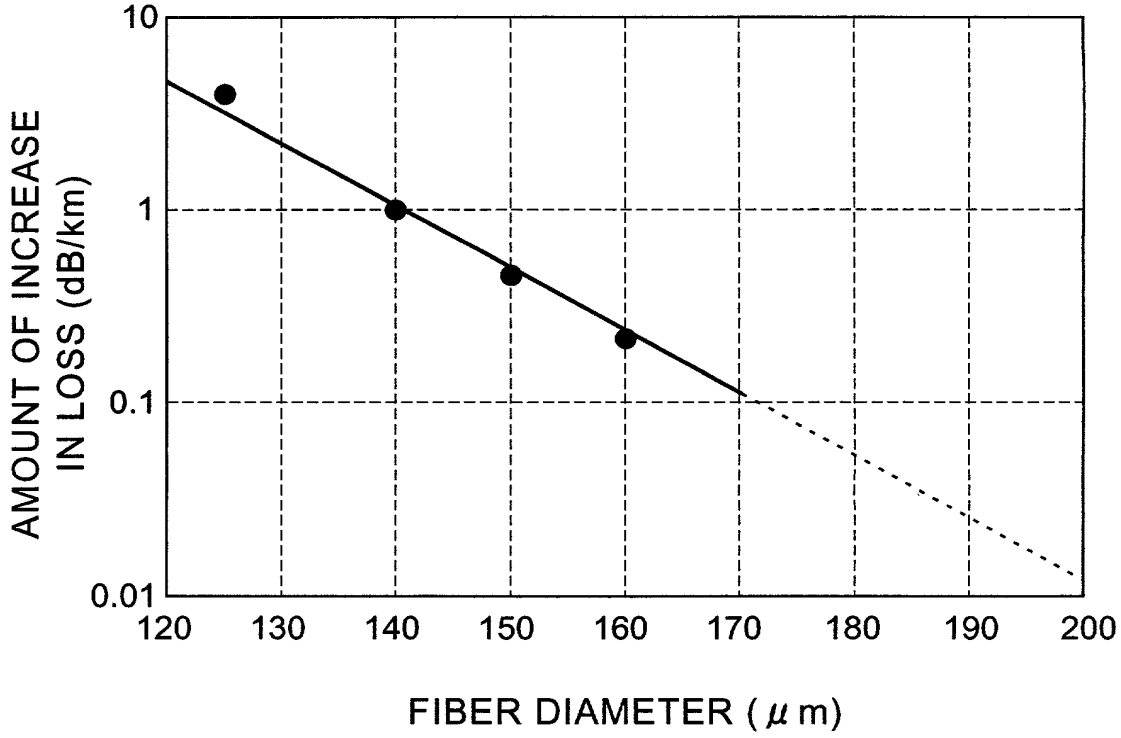

Fig.7A

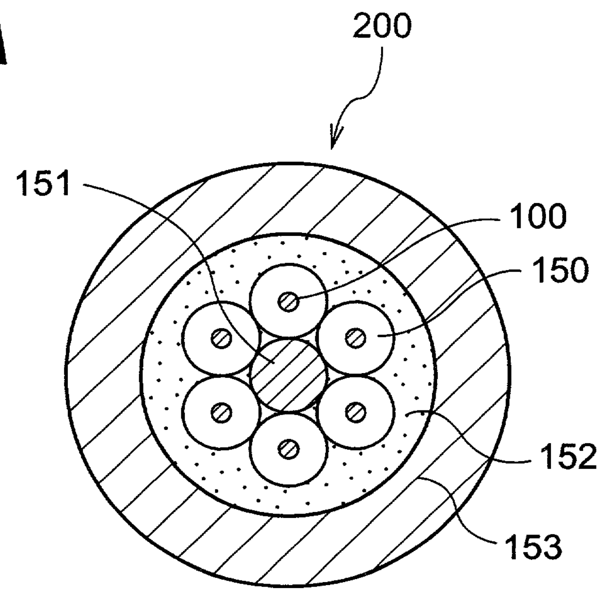

Fig.7B

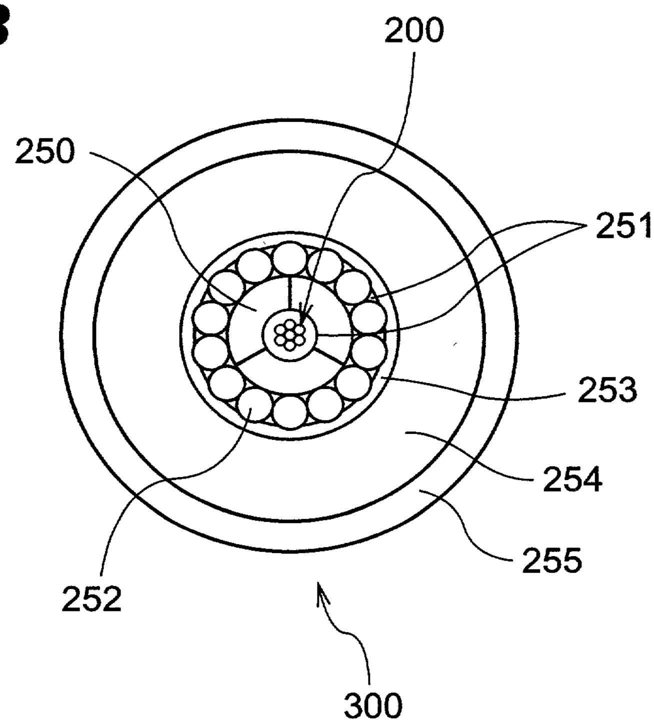

Fig.8

	SAMPLE 2 a	SAMPLE 2 b	SAMPLE 2 c
FIBER DIAMETER (μm)	124.9	125.2	139.6
MFD (μm)	9.98	10.96	11.06
EFFECTIVE AREA(μm^2)	54.8	64.8	65.1
CHROMATIC DISPERSION (ps/nm/km)	-2.1	-2.0	-2.2
CUTOFF WAVELENGTH(μm)	1.53	1.53	1.51

Fig.9

	SAMPLE 3 a	SAMPLE 3 b	SAMPLE 3 c	SAMPLE 3 d
FIBER DIAMETER (μm)	150.1	171.8	150.2	169.3
MFD (μm)	13.21	13.18	14.20	14.21
EFFECTIVE AREA (μm^2)	79.7	80.4	90.1	90.4
CHROMATIC DISPERSION (ps/nm/km)	-2.1	-2.2	-2.0	-2.2
CUTOFF WAVELENGTH (μm)	1.53	1.51	1.50	1.51

Fig.10

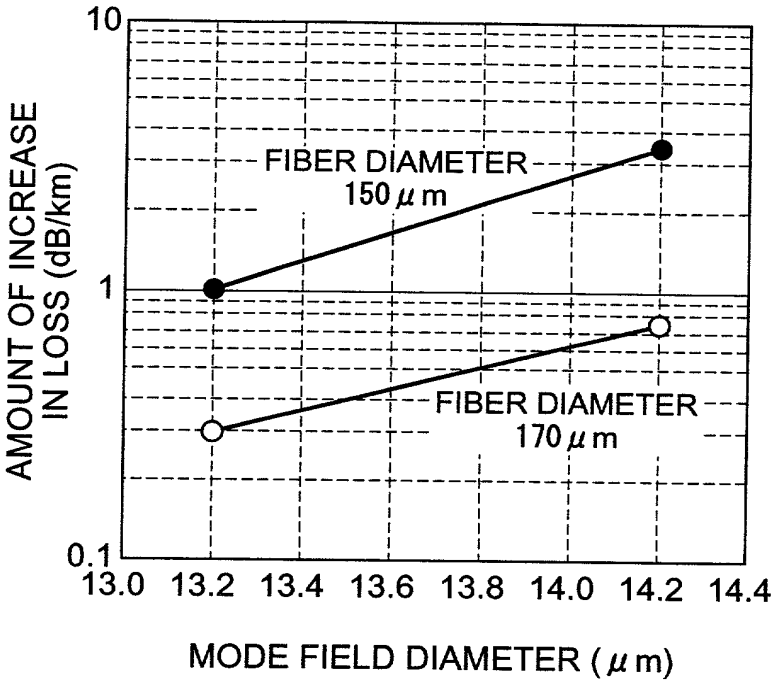
10
1
0.1
AMOUNT OF INCREASE IN LOSS (dB/km)
FIBER DIAMETER 150 μm
FIBER DIAMETER 170 μm
13.0
13.2
13.4
13.6
13.8
14.0
14.2
14.4
MODE FIELD DIAMETER (μm)

Fig.11

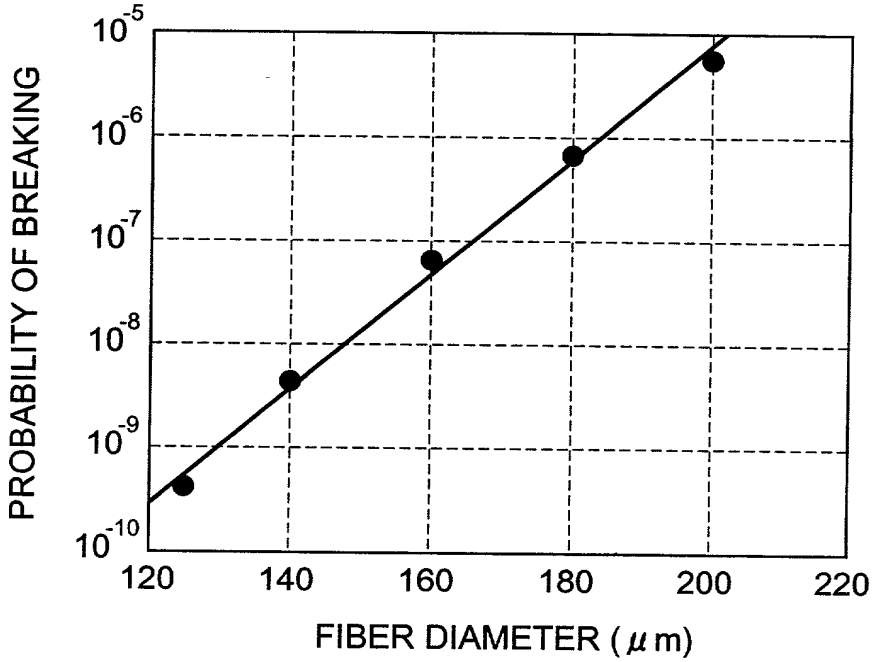
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
PROBABILITY OF BREAKING
120
140
160
180
200
220
FIBER DIAMETER (μm)

Fig.12

	SAMPLE4 a	SAMPLE 4 b
FIBER DIAMETER (μm)	125.1	150.4
MFD (μm)	11.98	12.17
EFFECTIVE AREA (μm^2)	69.7	72.1
CHROMATIC DISPERSION (ps/nm/km)	-2.1	-2.2
CUTOFF WAVELENGTH (μm)	1.53	1.51

Fig.13

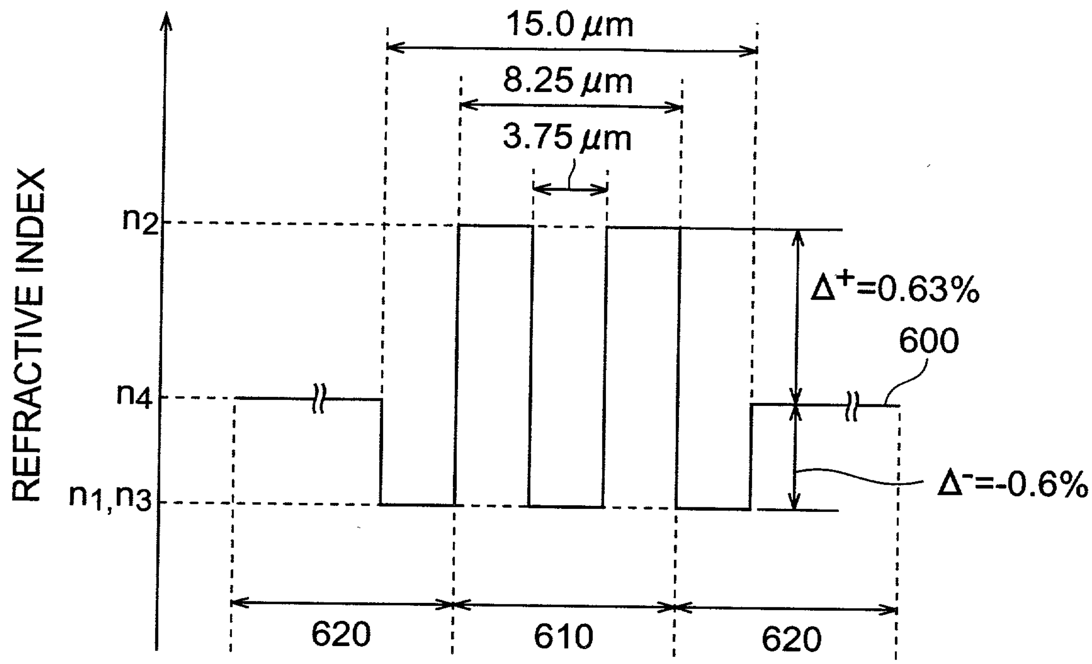

Fig.14

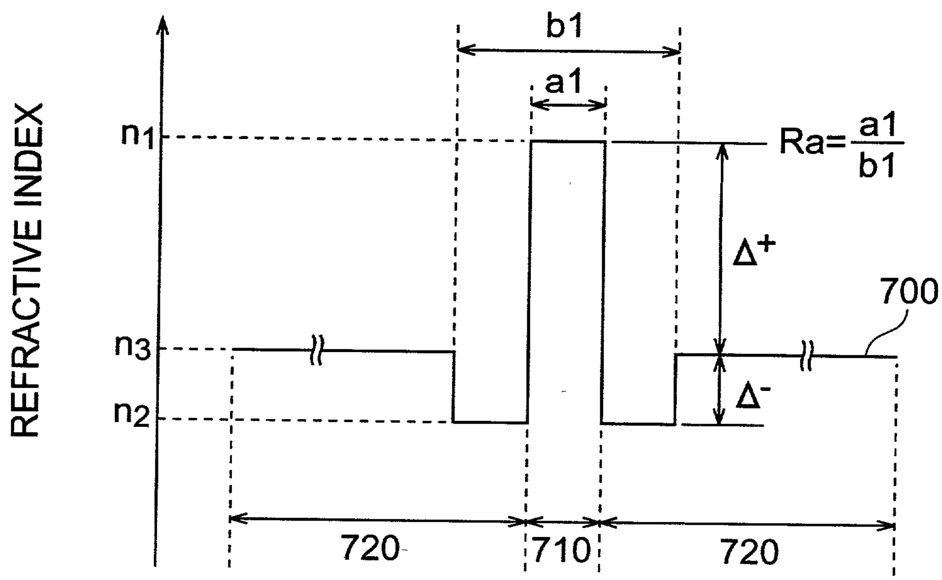

Fig.15